1. To estimate the one-sided limit of the function below as x approaches 2 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{2}{x}-1}{x-2}$$

A. $\{2.0000, 2.1000, 2.0100, 2.0010\}$

B. $\{2.0000, 1.9000, 1.9900, 1.9990\}$

C. $\{1.9000, 1.9900, 2.0100, 2.1000\}$

D. $\{2.1000, 2.0100, 2.0010, 2.0001\}$

E. $\{1.9000, 1.9900, 1.9990, 1.9999\}$

---

2. Based on the information below, which of the following statements is always true?

$$f(x) \text{ approaches } \infty \text{ as } x \text{ approaches } 3.$$

A. $f(x)$ is close to or exactly ∞ when x is large enough.

B. $f(x)$ is close to or exactly 3 when x is large enough.

C. $f(x)$ is undefined when x is close to or exactly 3.

D. x is undefined when $f(x)$ is close to or exactly ∞.

E. None of the above are always true.

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3. To estimate the one-sided limit of the function below as x approaches 4 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{4}{x}-1}{x-4}$$

A. $\{3.9000, 3.9900, 3.9990, 3.9999\}$

B. $\{3.9000, 3.9900, 4.0100, 4.1000\}$

C. $\{4.0000, 3.9000, 3.9900, 3.9990\}$

D. $\{4.1000, 4.0100, 4.0010, 4.0001\}$

E. $\{4.0000, 4.1000, 4.0100, 4.0010\}$

---

4. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 7^+} \frac{-9}{(x+7)^3} + 4$$

A. $f(7)$

B. $-\infty$

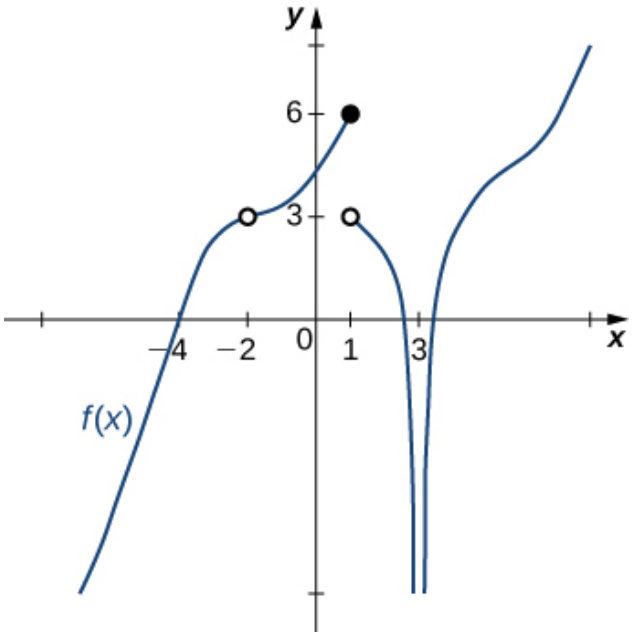
C. ∞

D. The limit does not exist

E. None of the above

---

5. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. 3

B. 1

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.

---

6. Based on the information below, which of the following statements is always true?

$$f(x) \text{ approaches } 13.648 \text{ as } x \text{ approaches } 1.$$

A. $f(13) = 1$

B. $f(13)$ is close to or exactly 1

C. $f(1) = 13$

D. $f(1)$ is close to or exactly 13

E. None of the above are always true.

---

7. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 7^+} \frac{-1}{(x+7)^3} + 7$$

A. $-\infty$

B. ∞

C. $f(7)$

D. The limit does not exist

E. None of the above

---

8. Evaluate the limit below, if possible.

$$\lim_{x \to 7} \frac{\sqrt{7x - 24} - 5}{6x - 42}$$

A. 0.100

B. 0.017

C. ∞

D. 0.117

E. None of the above

---

9. Evaluate the limit below, if possible.

$$\lim_{x \to 9} \frac{\sqrt{9x - 65} - 4}{3x - 27}$$

A. 1.000

B. 0.125

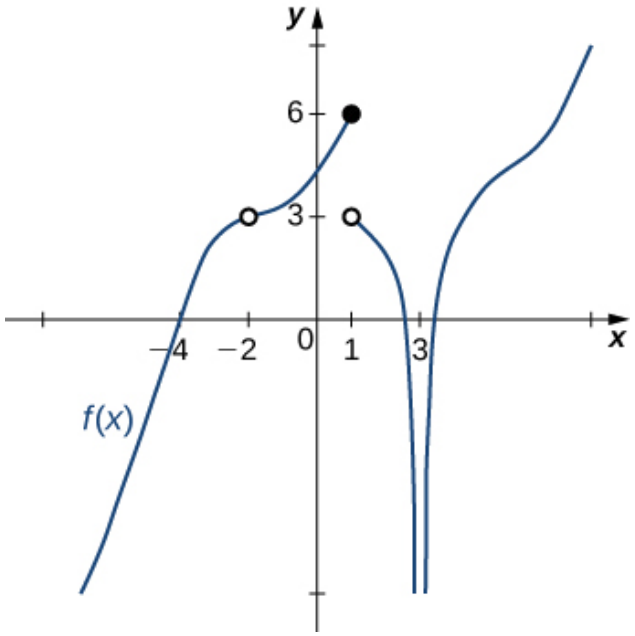
C. 0.042

D. ∞

E. None of the above

---

10. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. -2

B. 1

C. 3

D. Multiple a make the statement true.

E. No a make the statement true.

---

11. To estimate the one-sided limit of the function below as x approaches 6 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{6}{x} - 1}{x - 6}$$

A. $\{5.9000, 5.9900, 5.9990, 5.9999\}$

B. $\{6.0000, 6.1000, 6.0100, 6.0010\}$

C. $\{5.9000, 5.9900, 6.0100, 6.1000\}$

D. $\{6.1000, 6.0100, 6.0010, 6.0001\}$

E. $\{6.0000, 5.9000, 5.9900, 5.9990\}$

---

12. Based on the information below, which of the following statements is always true?

$$f(x) \textit{ approaches } \infty \textit{ as } x \textit{ approaches } 4.$$

A. $f(x)$ is close to or exactly ∞ when x is large enough.

B. $f(x)$ is close to or exactly 4 when x is large enough.

C. $f(x)$ is undefined when x is close to or exactly 4.

D. x is undefined when $f(x)$ is close to or exactly ∞.

E. None of the above are always true.

---

13. To estimate the one-sided limit of the function below as x approaches

1 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{1}{x}-1}{x-1}$$

A. $\{0.9000, 0.9900, 1.0100, 1.1000\}$

B. $\{0.9000, 0.9900, 0.9990, 0.9999\}$

C. $\{1.0000, 1.1000, 1.0100, 1.0010\}$

D. $\{1.0000, 0.9000, 0.9900, 0.9990\}$

E. $\{1.1000, 1.0100, 1.0010, 1.0001\}$

---

14. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x\to 7^+} \frac{5}{(x+7)^4} + 9$$

A. $f(7)$

B. ∞

C. $-\infty$

D. The limit does not exist

E. None of the above

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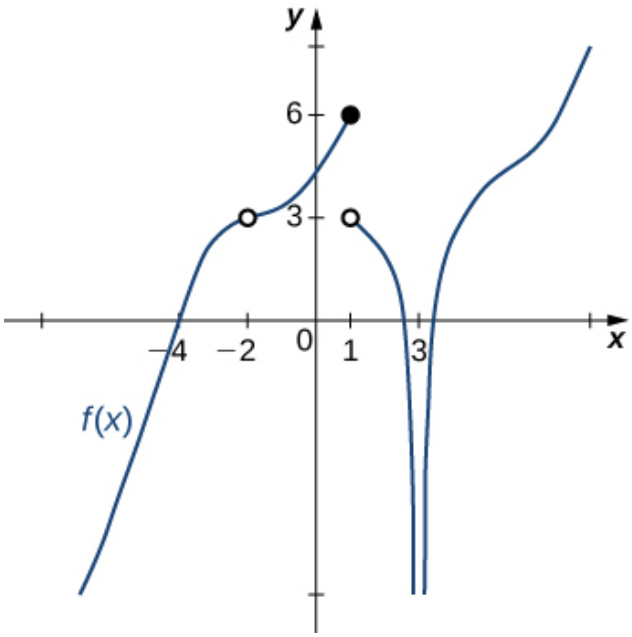
15. For the graph below, find the value(s) a that makes the statement true: $\lim_{x\to a} f(x) = 0$.



A. 0

B. 3

C. -4

D. Multiple a make the statement true.

E. No a make the statement true.

---

16. Based on the information below, which of the following statements is always true?

$$f(x) \text{ approaches } 19.045 \text{ as } x \text{ approaches } 8.$$

A. $f(19)$ is close to or exactly 8

B. $f(19) = 8$

C. $f(8) = 19$

D. $f(8)$ is close to or exactly 19

E. None of the above are always true.

---

17. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 6^-} \frac{-8}{(x-6)^3} + 2$$

A. $-\infty$

B. $f(6)$

C. ∞

D. The limit does not exist

E. None of the above

---

18. Evaluate the limit below, if possible.

$$\lim_{x \to 4} \frac{\sqrt{7x-3} - 5}{2x - 8}$$

A. ∞

B. 1.323

C. 0.050

D. 0.100

E. None of the above

---

19. Evaluate the limit below, if possible.

$$\lim_{x \to 7} \frac{\sqrt{5x-10} - 5}{3x - 21}$$

A. 0.100

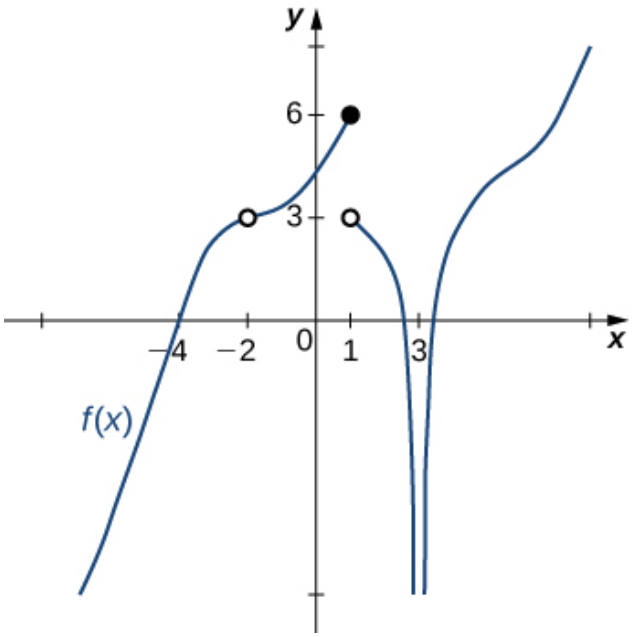
B. 0.745

C. ∞

D. 0.033

E. None of the above

20. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. 1

B. 3

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.

21. To estimate the one-sided limit of the function below as x approaches 2 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{2}{x} - 1}{x - 2}$$

A. $\{1.9000, 1.9900, 1.9990, 1.9999\}$

B. $\{1.9000, 1.9900, 2.0100, 2.1000\}$

C. $\{2.1000, 2.0100, 2.0010, 2.0001\}$

D. $\{2.0000, 2.1000, 2.0100, 2.0010\}$

E. $\{2.0000, 1.9000, 1.9900, 1.9990\}$

---

22. Based on the information below, which of the following statements is always true?

$$As\ x\ approaches\ 2,\ f(x)\ approaches\ \infty.$$

A. $f(x)$ is close to or exactly 2 when x is large enough.

B. $f(x)$ is undefined when x is close to or exactly 2.

C. x is undefined when $f(x)$ is close to or exactly ∞.

D. $f(x)$ is close to or exactly ∞ when x is large enough.

E. None of the above are always true.

---

23. To estimate the one-sided limit of the function below as x approaches 2 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{2}{x} - 1}{x - 2}$$

A. $\{1.9000, 1.9900, 1.9990, 1.9999\}$

B. $\{2.0000, 2.1000, 2.0100, 2.0010\}$

C. $\{2.0000, 1.9000, 1.9900, 1.9990\}$

D. $\{2.1000, 2.0100, 2.0010, 2.0001\}$

E. $\{1.9000, 1.9900, 2.0100, 2.1000\}$

---

24. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 2^-} \frac{-6}{(x+2)^3} + 2$$

A. ∞

B. $f(2)$

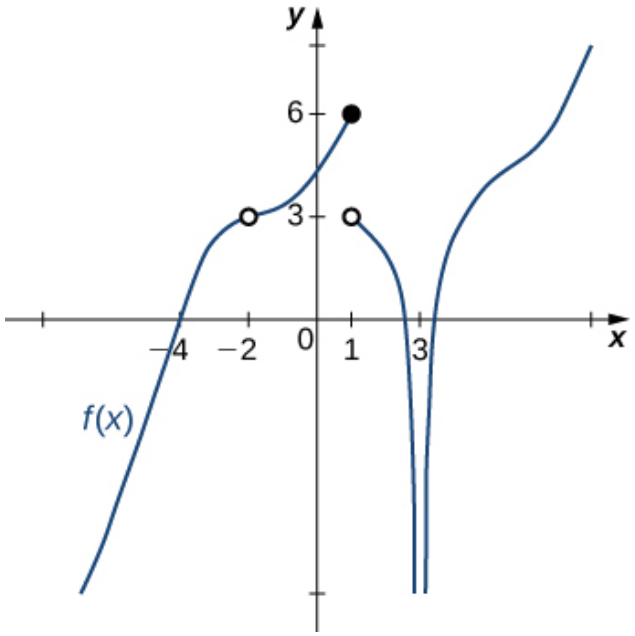
C. $-\infty$

D. The limit does not exist

E. None of the above

---

25. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x) = 3$.



A. -2

B. $-\infty$

C. 1

D. Multiple a make the statement true.

E. No a make the statement true.

---

26. Based on the information below, which of the following statements is always true?

$$f(x) \text{ approaches } \infty \text{ as } x \text{ approaches } 4.$$

A. $f(x)$ is close to or exactly 4 when x is large enough.

B. x is undefined when $f(x)$ is close to or exactly ∞.

C. $f(x)$ is undefined when x is close to or exactly 4.

D. $f(x)$ is close to or exactly ∞ when x is large enough.

E. None of the above are always true.

---

27. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to -4^-} \frac{-9}{(x+4)^7} + 6$$

A. $-\infty$

B. $f(-4)$

C. ∞

D. The limit does not exist

E. None of the above

---

28. Evaluate the limit below, if possible.

$$\lim_{x \to 8} \frac{\sqrt{5x-4} - 6}{3x - 24}$$

A. ∞

B. 0.028

C. 0.745

D. 0.083

E. None of the above

---

29. Evaluate the limit below, if possible.

$$\lim_{x \to 7} \frac{\sqrt{5x-10} - 5}{6x - 42}$$

A. 0.017

B. 0.100

C. ∞

D. 0.373

E. None of the above

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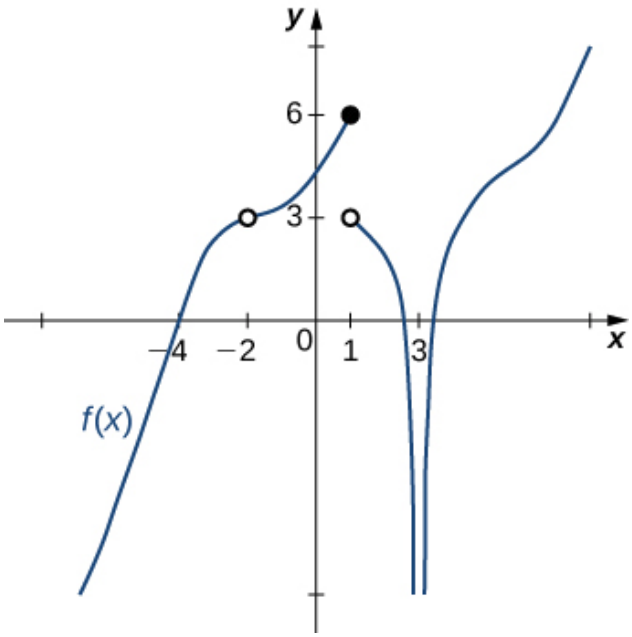
30. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x) = -\infty$.



A. $-\infty$

B. 3

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.
